



## **17/19-INCH VALUE TFT-LCD MONITOR**



### **USER MANUAL**

Please read this manual thoroughly before use, and keep it handy for future reference.



# CONTENTS

SAFETY INSTRUCTION .....	2 ~ 3
CAUTIONS .....	4
FCC RF INTERFERENCE STATEMENT .....	5
CONNECTING WITH EXTERNAL EQUIPMENT .....	6
REMOTE FUNCTIONS .....	7
CONTROLS AND FUNCTIONS .....	8 ~ 14
MOUNTING GUIDE .....	15
D-SUB CONNECTOR PIN ASSIGNMENTS .....	16
POWER MANAGEMENT .....	17
SPECIFICATION .....	18
TROUBLE SHOOTING GUIDE .....	19

This Monitor was  
Manufactured by ISO 9001  
Certified Factory

# SAFETY INSTRUCTION

## Important Safety Instruction

1. Read these instructions.
2. Keep these Instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug.  
Apolarized plug has two blades with one wider than the other.  
Agrounding type plug has two blades and a third grounding prong.  
The wide blade or the third prong are provided for your safety.  
If the provided plug does not fit into your outlet, consult an electrician for replacement of the bsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachment/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus the apparatus has been exposed to rain or moisture does not operate normally or has been dropped.



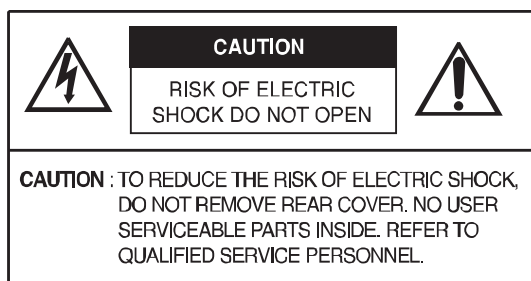
# SAFETY INSTRUCTION

- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

14 Minimum distances(e.g. 10cm) around the apparatus for sufficient ventilation.

“WARNING – To reduce the risk of fire or electric shock, do not expose the apparatus to rain or moisture.”

“The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.”



This symbol is intended to alert the user to the presence of uninsulated: dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance.

# CAUTIONS

## CAUTION

*The power supply cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.*

## ATTENTION

*Le cordon d'alimentation est utilisé comme interrupteur général. La prise de courant doit être située ou installée à proximité du matériel et être facile d'accès*

### CAUTION TO SERVICE PERSONNEL

POWER SUPPLY CORD IS USED AS MAIN POWER DISCONNECT DEVICE IN THIS PRODUCT. UNPLUG THIS PRODUCT FROM THE WALL OUTLET BEFORE REMOVING THE BACK COVER AND SERVICING

### EMISSION CHARACTERISTICS TESTED BY SEMKO

THIS PRODUCT HAS BEEN TESTED AND HAS SHOWN COMPLIANCE WITH THE NATIONAL SPECIFICATIONS SUCH AS SWEDISH MPR 1990.10.(MPR II)

#### ► NEVER REMOVE THE BACK COVER

Removal of the back cover should be carried out only by qualified personnel.

#### ► DO NOT USE IN HOSTILE ENVIRONMENTS

To prevent shock or fire hazard, do not expose the unit to rain or moisture.

This unit is designed to be used in the office or home. Do not subject the unit to vibrations, dust or corrosive gases.

#### ► KEEP IN A WELL VENTILATED PLACE

Ventilation holes are provided on the cabinet to prevent the temperature from rising.

Do not cover the unit or place anything on the top of unit.

#### ► AVOID HEAT

Avoid placing the unit in direct sunshine or near a heating appliance.

#### ► TO ELIMINATE EYE FATIGUE

Do not use the unit against a bright background and where sunlight or other light sources will shine directly on the monitor.

#### ► BE CAREFUL OF HEAVY OBJECT

Neither the monitor itself nor any other heavy object should rest on the power cord.

Damage to a power cord can cause fire or electrical shock.

# FCC RF INTERFERENCE STATEMENT

## **NOTE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio, TV technician for help.
- Only shielded interface cable should be used.

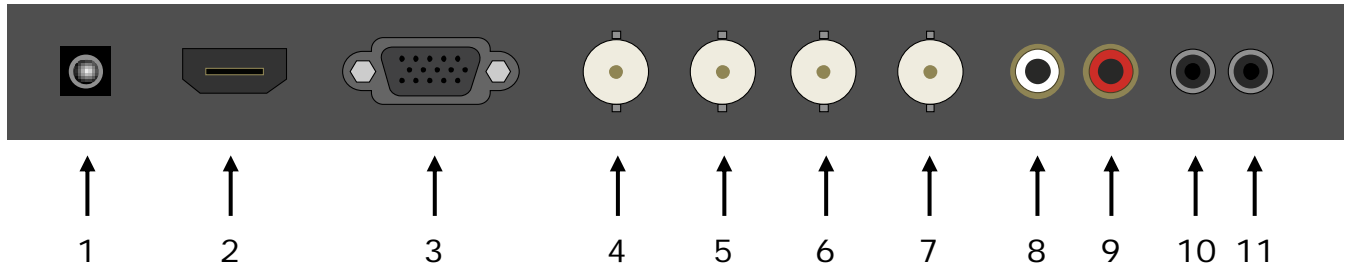
Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

## **► DOC COMPLIANCE NOTICE**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the radio interference regulation of Canadian Department of communications.

# CONNECTING WITH EXTERNAL EQUIPMENT

## Rear Connection



1. DC 12V IN
2. HDMI IN
3. VGA (RGB-PC) IN
4. AV1 IN
5. AV1 OUT
6. AV2 IN
7. AV2 OUT
- 8 & 9. AUDIO L&R (AV1 & AV2)
10. PC STEREO IN (VGA)
11. TRIGGER IN



# REMOTE FUNCTIONS

## Remote Controller(Optional)

### 1. POWER(🔌)

Turns the power ON or OFF. There will be a few seconds delay before the display appears.

### 2. SOURCE

Selects an input source.

### 3. ARC (Aspect Ratio Control)

Selects a screen ratio.

### 4. APC (Auto Picture Control)

Selects a picture mode.

### 5. ACC (Auto Color Control)

Selects a color mode.

### 6. AV1

Selects AV1 mode.

### 7. AV2

Selects AV2 mode.

### 8. PC

Selects PC mode.

### 9. HDMI

Selects HDMI mode.

### 10. AUTO

Auto geometry adjustment in the RGB-PC source.

### 11. MUTE

Mutes the sound.

### 12. MENU

Activates and exits the On Screen Display.

### 13. EXIT

Exits the On Screen Display.

### 14. VOL(◀ & ▶)

Increases or decreases the level of audio volume.

### 15. UP/DOWN (▲/▼)

Moves upwards or downwards in the OSD menu.

### 16. ENTER

Enters an OSD submenu or accepts your selection

### 17. INFO

Displays the information about input source.

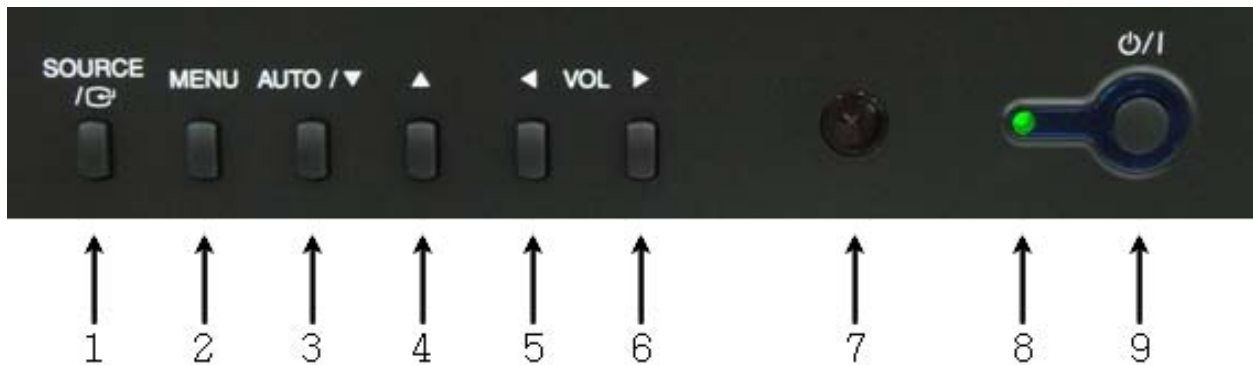
### 18. HOLD

Stops the Trigger function.



# CONTROLS AND FUNCTIONS

## Front Key Control



### 1. SOURCE /

Selects an input source.

Enters a submenu or accepts your selection in the OSD menu.

### 2. MENU

Activates and exits the On Screen Display.

This button can also be used to move previous menu or status.

### 3 & 4. AUTO/▼, ▲

These buttons allow user to move the sub-menu of the activated function.

AUTO/▼ : Auto geometry adjustment

### 5 & 6. ◀ VOL ▶

Adjust the volume and menu settings.

### 7. IR Sensor

Remote controller sensor.

### 8. POWER LED

Turned ON : Green color

Turned OFF : LED Off

### 9. POWER ON/OFF(⏻/ I)

Turns the power ON or OFF. There will be a few seconds delay before the display appears.

# CONTROLS AND FUNCTIONS

## OSD Menu Description

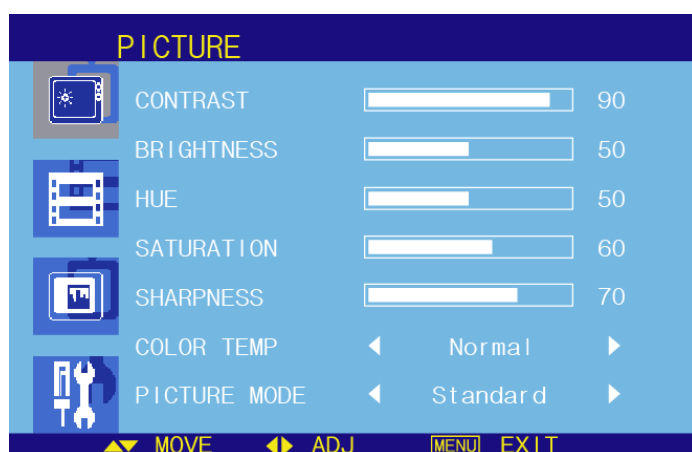
All picture, sound settings and setup for the monitor can be adjusted in the OSD menu.

(On Screen Display)

To adjust the OSD screen:

1. Press the **Menu** button to enter the OSD menu.
2. Press the **▲/▼** buttons to select the desired option. The selected option is highlighted.
3. Press the **▶** button to enter the submenu for adjusting items.
4. Change the value you wish to adjust by using the **◀/▶** buttons.
5. Press the **◀** button to exit the submenu for adjusting items.
6. Press the **Menu** button to exit the OSD menu.

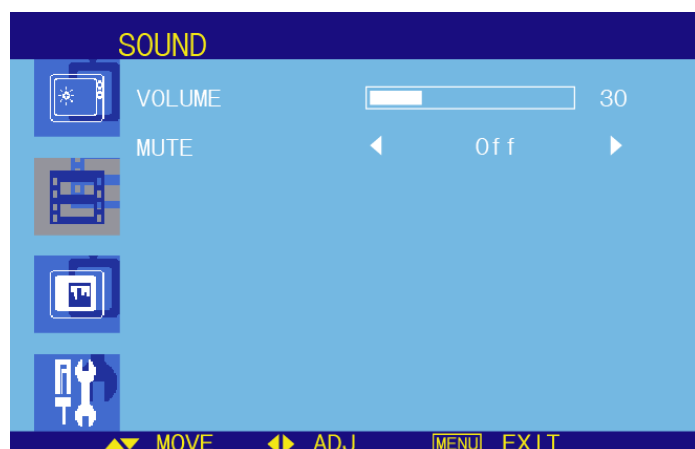
## A. PICTURE



Option	Function	Value
CONTRAST	Adjusts intensity of the image.	0 ~ 100
BRIGHTNESS	Adjusts brightness of the screen.	0 ~ 100
HUE	Adjust the hue of picture.	0 ~ 100
SATURATION	Adjust the saturation of picture.	0 ~ 100
SHARPNESS	Adjusts sharpness of the picture.	0 ~ 100
COLOR TEMP	Select the color temp of picture	Normal, Warm, Cool
PICTURE MODE	Select the picture mode of picture.	Standard, Cinema, Vivid

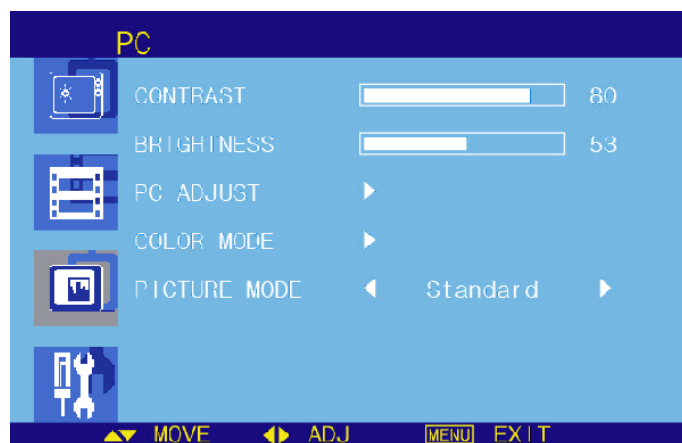
# CONTROLS AND FUNCTIONS

## B. SOUND



Option	Function	Value
VOLUME	Adjust the level of audio volume.	0 ~ 100
MUTE	Mutes speaker sound.	Off or On

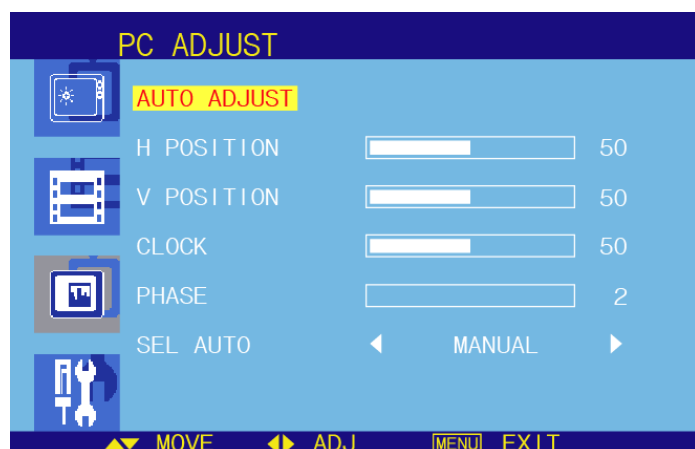
## C. PC (Only PC Mode)



Option	Function	Value
CONTRAST	Adjusts intensity of the image.	0 ~ 100
BRIGHTNESS	Adjusts brightness of the screen.	0 ~ 100
PC ADJUST	Adjusts the PC Mode.	See the table on Next page
COLOR MODE	Adjusts the vertically picture position.	See the table on Next page
PICTURE MODE	Adjusts the vertical noise of screen image.	Standard, Cinema, Vivid

# CONTROLS AND FUNCTIONS

## PC ADJUST

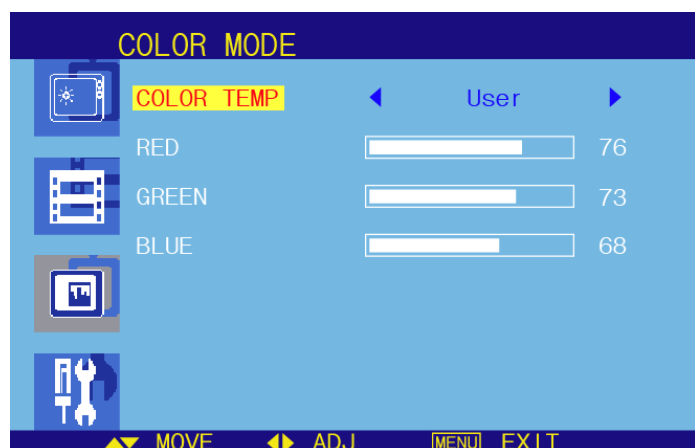


Option	Function	Value
AUTO ADJUST	Auto geometry adjustment.	
H POSITION	Adjusts the horizontally picture position.	0 ~ 100
V POSITION	Adjusts the vertically picture position.	0 ~ 100
CLOCK	Adjusts the vertical noise of screen image.	0 ~ 100
PHASE	Adjusts the number of horizontal picture elements.	0 ~ 100
SEL AUTO	Selects the type of auto adjustment.	MANUAL <sup>1)</sup> , AUTO <sup>2)</sup>

1) Manual: Operating the auto adjustment of the screen only the first time.

2) Auto: Operating the auto adjustment every time the resolution is changed.

## COLOR MODE



Cool	Gives the white color a bluish tint.
Normal	Gives the white color a neutral tint.
Warm	Gives the white color a reddish tint.
User <sup>1)</sup>	To manually adjust the color tones (Red, Green, and Blue).

1) Unavailable in AV1, AV2 and HDMI Mode (Only PC Mode).

# CONTROLS AND FUNCTIONS

## D.SETUP



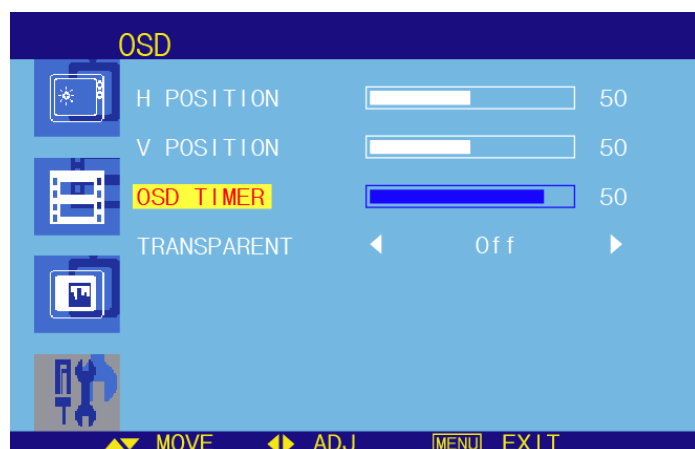
Option	Function	Value
Language	Sets the language of the OSD menu.	English, German, French, Italian, Spanish, Nederland and Korea
OSD	Sets the OSD.	See the table on Next page
Key Lock <sup>1)</sup>	Locks all buttons of the monitor. <b>Note:</b> Use remote controller to unlock.	Off or On
ARC	Sets the screen ratio.	AV Mode: 16:9, 1:1, 4:3, 14:9, Zoom1, Zoom2, Full PC Mode: 4:3 HDMI Input: 4:3, Full <sup>2)</sup> 2) Full : These resolution are supported when DTV signal of HDMI is inputted. (480p, 720p, 1080i/p)
TRIGGER	See the table on Next page.	
RECALL	Resets the monitor settings to the factory default.	

### 1) How to unlock

- ① On the front key: Press the MENU and UP button at the same time over 3 seconds.
- ② On the Remote Controller: The Remote Controller operates well because the Key Lock function is only allowed for the front key of this product.

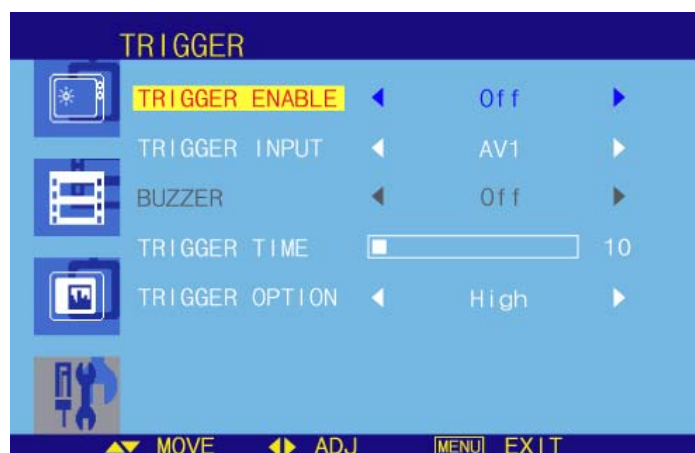
# CONTROLS AND FUNCTIONS

## OSD



Option	Function	Value
H POSITION	Move OSD horizontally on screen right or left.	0 ~ 100
V POSITION	Move OSD vertically on screen up or down.	0 ~ 100
OSD TIMER	Adjust OSD displaying time.	5 ~ 60
TRANSPARENT	Adjust OSD transparent.	Off or On

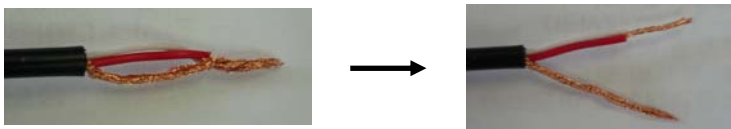
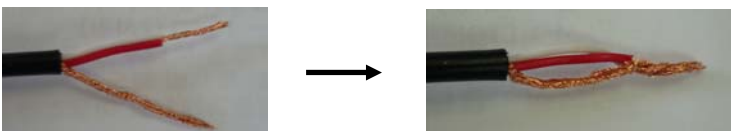
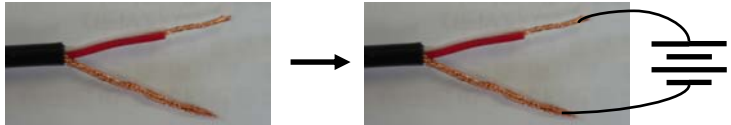
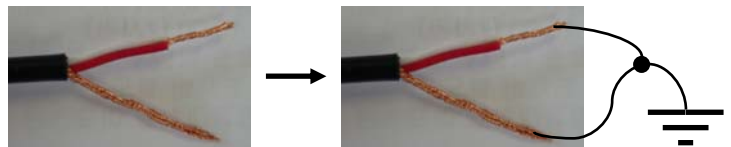
## TRIGGER



Option	Function	Value
TRIGGER ENABLE	Activates the trigger feature.	Off or On
TRIGGER INPUT	Selects the input source for the Trigger.	AV1, AV2, RGB-PC or HDMI
BUZZER	Not operating.	
TRIGGER TIME	Selects the amount of time, in seconds, that the monitor displays the trigger Input image.	3 ~ 100
TRIGGER OPTION	Selects the type of physical trigger input.	See the table on Next page.

# CONTROLS AND FUNCTIONS

## TRIGGER OPTION

<p>N/C(Normally Closed): The Trigger function is activated when the trigger cable is opened.</p>	
<p>N/O(Normally Opened): The Trigger function is activated when the trigger cable is closed.</p>	
<p>High: The Trigger function is activated when the trigger signal is DC 2~5[V].</p>	
<p>Low: The Trigger function is activated when the trigger signal is DC 0~0.6[V]. <b>Note:</b> In this case, trigger port has high status electrically, so the trigger cable has to have ground(or earth) status to be activated.</p>	

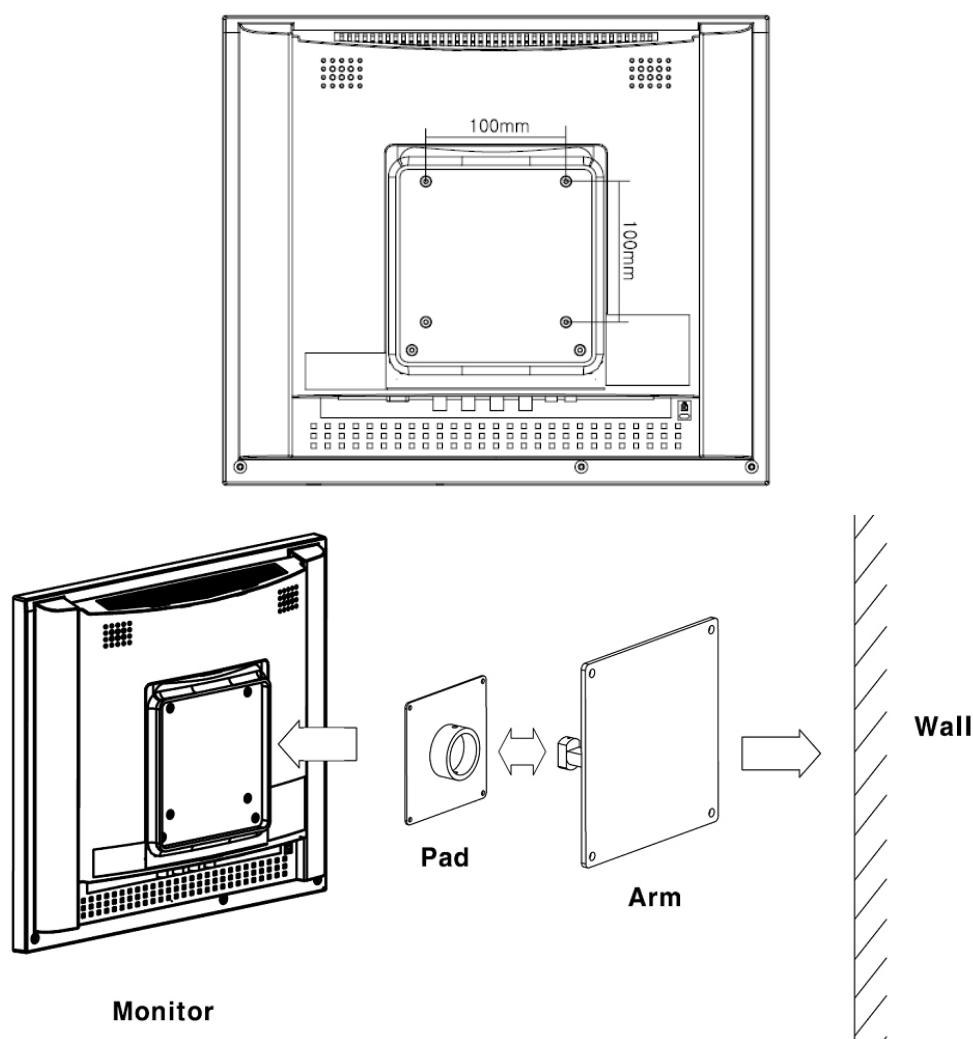


# MOUNTING GUIDE

Using the VESA standard wall mount design and the 100mm hole pattern on the back panel to install the LCD monitor to the wall.

## Wall-mount Installation (Option)

1. The Monitor fixing bracket to the monitor using the fixing screws provided.
2. The monitor fixing bracket assembled with monitor



### ※ Attention!

You must use four M4x10 screws to assemble this monitor and the wall mount bracket.

### ※ WARNING!

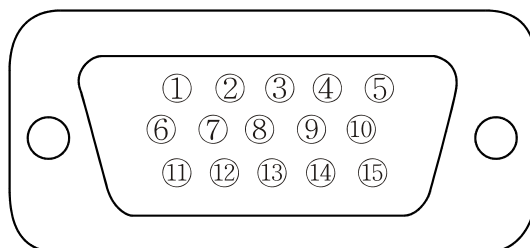
If user use longer than M4x10 it may cause the damage on the unit. Please follow instructed bolt size & length.

# D-SUB CONNECTOR PIN ASSIGNMENTS

## ► Pin Assignments

Pin 1	RED VIDEO	9	
2	GREEN VIDEO	10	SIGNAL CABLE DETECT
3	BLUE VIDEO	11	GROUND
4	GROUND	12	SDA(for DDC)
5	GROUND	13	H-SYNC.(or H+V SYNC.)
6	RED GROUND	14	V-SYNC.
7	GREEN GROUND	15	SCL(for DDC)
8	BLUE GROUND		

## D-SUB



## ► Accessories

1. Power cord
2. Power adaptor
3. User's manual
4. Cable (PC or HDMI)
5. Stereo cable (Option)
6. Remote controller (Option)
7. Batteries (Option)
8. Wall mount (Option)
9. Rack mount (Option)

# POWER MANAGEMENT

## Power Consumption

Mode	Power Consumption
Turned On	< 30W
Turned Off	< 1W

## LED Indicator

The power management feature of the monitor is comprised of two stages:  
Turned on(Green) and turned off(LED Off).

Mode	LED	Monitor Operation
Turned On	Green	Normal Operation
Turned Off	LED Off	Not Operation

# SPECIFICATIONS

		17"	19"
LCD Type	Type	17" Diagonal AM-TFT (Active-Matrix)	19" Diagonal AM-TFT (Active-Matrix)
	Pixel pitch(mm)	0.264(H) x 0.264(V)	0.294(H) x 0.294(V)
	Brightness	250cd/ m <sup>2</sup> (Typical)	350cd/ m <sup>2</sup> (Typical)
	Contrast ratio	1000:1 (Typical)	
	Viewing angle	170°/160° (H/V)	
	Response time	5ms (Typ., on/off)	
Resolution (H x V)		1280X1024 @60Hz	
Frequency		Horizontal: 31~64kHz, Vertical: 50~75Hz	
Input Signal		VIDEO (2ch input 1.0Vp-p, 75Ω terminated, loop-through out)	
		HDMI (High Definition Multimedia Interface)	
		VGA (RGB-PC)	
		TRIGGER IN	
		PC STEREO IN	
		AV(composite) Sound R & L	
Active Display Area (H x V)		337.920 mm X 270.336 mm	376.32mm X 301.06mm
Packing Dimensions (W x H x D)		435mm X 235mm X 472mm (17.13" X 9.25" X 18.58")	495mm X 235mm X 505mm (19.49" X 9.25" X 19.88")
Weight	New	5.18Kg (11.4 lbs)	5.47Kg (12.03 lbs)
	Gross	6.98Kg (15.36 lbs)	7.47Kg (16.43 lbs)
Electrical Ratings		12V === 3A (100-240V~, 50/60Hz)	12V === 3.5A (100-240V~, 50/60Hz)

►► **NOTE:** Technical specifications are subject to change without notice.

# TROUBLESHOOTING GUIDE

TROUBLE	TROUBLESHOOTING TIP
No image on display screen	<ol style="list-style-type: none"> <li>1. Check that power cord of the Monitor have been connected securely into wall outlet or grounded extension cable or strip.</li> <li>2. Power switch should be in the ON position and LED is lit.</li> <li>3. Check that the Brightness and/or the Contrast adjustments of the Display have not been turned down to minimum levels.</li> </ol>
"NO SIGNAL" message on screen	<ol style="list-style-type: none"> <li>1. The signal cable should be completely connected to the video card/computer.</li> <li>2. The video card should be completely seated in its slot and the computer is switched ON.</li> </ol>
Display image is not centered, too small or too large in PC mode	Push the down key in front side or Auto key in remote controller.
Vertical or Horizontal noise is present in the picture	Adjust Clock and Phase in the OSD.

## WEEE Symbols

**Correct Disposal of This Product  
(Waste Electrical & Electronic Equipment)**  
(Applicable in the European Union and other  
European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.



## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



